

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
22 July 2004 (22.07.2004)

PCT

(10) International Publication Number
WO 2004/061740 A1

(51) International Patent Classification⁷: **G06F 17/60**

(21) International Application Number:
PCT/US2003/041413

(22) International Filing Date:
29 December 2003 (29.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/436,809 27 December 2002 (27.12.2002) US

(71) Applicant (*for all designated States except US*):
PAYSCALE, INC. [US/US]; 227 Bellevue Way NE
#532, Bellevue, WA 98004 (US).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): TARR, Douglas
[—/—]; 124 West 60th Street, Apt. 30B, New York,
NY 10023 (US). GIORDANO, Joseph, III [—/—]; 227
Bellevue Way NE, #532, Bellevue, WA 98004 (US).

(74) Agents: GLENN, Michael, A. et al.; Glenn Patent Group,
Suite L., 3475 Edison Way, Menlo Park, CA 94025 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- with amended claims

Date of publication of the amended claims: 7 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: A SURVEYING APPARATUS AND METHOD FOR COMPENSATION REPORTS

(57) Abstract: A method and apparatus for providing targeted online compensation reports that accounts for unique individual characteristics, such as related to a job, by using dynamic profiles is described. The preferred embodiment uses a survey engine (247) having a collaborative filtering engine that determines appropriate questions to ask the user during the survey, and may further provide suggested possible answers. A collection of user profiles are used for comparison purposes and to further produce individualized compensation reports.

WO 2004/061740 A1

AMENDED CLAIMS

[received by the International Bureau on 23 August 2004 (23.08.2004)
claims 1-103 are replaced by new claims 1-101]

1. A method for surveying a user, comprising the steps of:
 - presenting at least one question to said user, said at least one question being pertinent for determination of at least one affinity group to said user, and
 - presenting at least one additional question which is a result of an answer provided by said user to a previous question presented to said user;
 - creating a user profile for said user based on said user's answers to said at least one question, wherein said user profile is comprised of said at least one question and at least a corresponding answer;
 - adding said user profile to one or more affinity groups; and
 - storing said user profile.
2. The method of Claim 1, wherein said question is comprised of a set of one or more question fields that form a logical grouping of questions into a single record.
3. The method of Claim 1, wherein said at least one additional question is presented as a result of at least one of:
 - popularity of said at least another question within said at least an affinity group;
 - being a most frequently answered said at least another question within said at least an affinity group;
 - being a most recently answered said at least another question within said

at least an affinity group; and
relation to said at least a question.

4. The method of Claim 1, wherein said at least a corresponding answer is an open text.
5. The method of Claim 5, wherein said open text allows said user to add a new answer to said at least a corresponding answer.
6. The method of Claim 6, wherein said new answer is used as one of said respective answers when said at least a question is suggested.
7. The method of Claim 1, wherein said at least a question may have one or more possible answers displayed.
8. The method of Claim 1, wherein said user may select one or more answers to said question.
9. The method of Claim 8, wherein said one or more possible answers displayed is based on at least one of:
 - popularity of an answer within said at least an affinity group;
 - being a most frequent answer within said at least an affinity group; and
 - being a most recent answer within said at least an affinity group.

10. The method of Claim 1, further comprising the step of:
filtering said user's answers to said question.
11. The method of Claim 11, wherein said filtering is performed in at least one of real-time and batch mode.
12. The method of Claim 11, wherein said filtering further comprises the modification of an answer to said question based on at least one of:
predetermined criterion;
one or more filtering rules;
consistency with previously answered questions;
consistency with all answered questions; and
consistency with answers of at least said affinity group.
13. The method of Claim 1, further comprising the steps of:
periodically creating a new affinity group; and
associating at least a user to said new affinity group.
14. The method of Claim 1, further comprising the step of:
creating a new affinity group by a user.
15. The method of Claim 15, further comprising the step of:
associating matching user profiles with said new affinity group.

16. The method of Claim 1, further comprising:
the steps of providing a report.
17. The method of Claim 17, wherein the generation of said report is constrained by at least one of an attribute of said user profile and a goal.
18. The method of Claim 18, wherein said goal comprises at least one of:
 - a profile attribute value;
 - a range of profile attribute values;
 - a Boolean value reflective of a set of values;
 - a Boolean value reflective of a set of non-values;
 - a date range;
 - a minimum count of matching profiles;
 - a maximum count of matching profiles;
 - a question filter; and
 - a match score threshold.
19. The method of Claim 18, wherein said constraint results are weighted such that deterministic fields have a higher score than non-deterministic fields.
20. The method of Claim 18, wherein for the purpose of providing said report, said method comprises the step of matching to at least one of said affinity groups at least one of a goal and a user profile.

21. The method of Claim 21, further comprising the step of:
determining the best match.
22. The method of Claim 21, further comprising the step of:
determining one or more matches which are the best matches from a plurality of possible matches.
23. The method of Claim 23, wherein said matches are arranged by order of match score, said order being grouped to at least two levels of matches, based on said score.
24. The method of Claim 21, wherein said step of matching further comprises the steps of:
scoring of each match with said affinity groups ;and
weighting the importance of including each said match in the aggregation of said report.
25. The method of Claim 21, wherein said step of matching to at least one of said affinity groups further comprises the steps of:
classifying of each match with said affinity groups as being one of key in meeting said goal and ancillary in meeting said goal.
26. The method of Claim 18, wherein said goal is one of a personal goal and an informative goal.

27. The method of Claim 27, wherein said informative goal provides aggregated information pertaining to a plurality of user profiles.
28. The method of Claim 28, wherein said aggregated information comprises at least statistical information.
29. The method of Claim 27, wherein said report resulting of said personal goal provides a comparison of the user having said user profile to at least one of a plurality of user profiles and an affinity group.
30. A method for a compensation survey of a user, comprising the steps of:
- presenting at least one question to said user, said at least one question being pertinent for determination of at least compensation within an affinity group of said user, and further presenting at least another question which is a result of an answer provided by said user in response to a previous question presented to said user;
 - creating a user profile for said user based on said user's answers to said at least one question, wherein said user profile is comprised of said at least one question and at least one corresponding answer;
 - adding said user profile to one or more affinity groups; and
 - storing said user profile.

31. The method of Claim 31, wherein said question is comprised of a set of one or more question fields that form a logical grouping of questions into a single record.
32. The method of Claim 31, wherein said at least another question is presented as a result of at least one of:
 - popularity of said at least another question within said at least an affinity group, being a most frequently answered said at least another question within said at least an affinity group, being a most recently answered said at least another question within said at least an affinity group, relation to said at least a question.
33. The method of Claim 31, wherein said at least a corresponding answer is an open text.
34. The method of Claim 35, wherein said open text allows said user to add a new answer to said at least a corresponding answer.
35. The method of Claim 36, wherein said new answer is used as one of said respective answers when said at least a question is suggested.
36. The method of Claim 31, wherein said at least a question may have one or more possible answers displayed.
37. The method of Claim 31, wherein said user may select one or more answers to said question.

38. The method of Claim 38, wherein said one or more possible answers displayed is based on any of:
- popularity of an answer within said at least an affinity group;
 - being a most frequent answer within said at least an affinity group; and
 - being a most recent answer within said at least an affinity group.
39. The method of Claim 31, further comprising the step of:
- filtering said user's answers to said question.
40. The method of Claim 41, wherein said filtering is performed in at least one of real-time and batch mode.
41. The method of Claim 41, said filtering further comprising the step of:
- modifying an answer to said question based on any of:
 - predetermined criterion;
 - one or more filtering rules;
 - consistency with previously answered questions;
 - consistency with all answered questions; and
 - consistency with answers of at least said affinity group.
42. The method of Claim 31, further comprising the steps of:
- periodically creating a new affinity group; and

associating at least one user to said new affinity group.

43. The method of Claim 31, further comprising the step of:

creating a new affinity group by a user.

44. The method of Claim 45, further comprising the step of:

associating matching user profiles with said new affinity group.

45. The method of Claim 31, wherein said affinity group comprises any of:

profession;

geographic location;

compensation;

compensation range;

experience;

experience range;

position; and

position range.

46. The method of Claim 31, further comprising the step of:

providing a compensation report.

47. The method of Claim 48, wherein the generation of said compensation report is constrained by at least one of an attribute of said user profile and a goal.

48. The method of Claim 49, further comprising the step of:
weighting said constraint results , wherein deterministic fields have a higher score than non-deterministic fields.
49. The method of Claim 49, wherein said goal comprises any of:
a desired compensation;
a desired range of compensation;
a desired geographic location;
a desired firm; and
a desired range of firms.
50. The method of Claim 49, wherein for the purpose of providing said report, said method comprises the step of:
matching to at least one of said affinity groups at least one of a goal and a user profile.
51. The method of Claim 52, further comprising the step of:
determining a best match.
52. The method of Claim 52, further comprising the step of:
determining one or more matches which are best matches from a plurality of possible matches.

53. The method of Claim 54, wherein said matches are arranged by order of match score, said order being grouped to at least two levels of matches, based on said score.
54. The method of Claim 52, wherein said step of matching further comprises the steps of:
- the scoring of each match with said affinity groups; and
 - weighting importance of including best match in an aggregation of said report.
55. The method of Claim 49, wherein said goal is any of a personal goal and an informative goal.
56. The method of Claim 57, wherein said personal goal is any of:
- compensation;
 - compensation range;
 - salary;
 - salary range;
 - geographic location;
 - position; and
 - position range.
57. The method of Claim 57, wherein said informative goal provides aggregated information pertaining to a plurality of user profiles.

58. The method of Claim 59, wherein said aggregated information comprises at least statistical information.
59. The method of Claim 60, wherein said statistical information comprises any of:
- average compensation;
 - average salary;
 - median compensation;
 - median salary;
 - salary percentile;
 - standard deviation;
 - trend;
 - profile count;
 - most frequent compensation; and
 - most frequent salary.
60. The method of Claim 57, wherein said report resulting from said personal goal provides a comparison of a user having said user profile to at least one of a plurality of user profiles and an affinity group.
61. The method of Claim 31, wherein said compensation any of:
- annual salary;
 - monthly salary;
 - weekly salary;

hourly rate;
bonus;
tip;
benefits; and
vacation time.

62. A system for compensation surveying and reporting, comprising:
- means for accessing a Website, said Website being connected to a network;
 - means for surveying a user for information pertinent for determination of compensation, said surveying comprising of presenting at least a question which is a result of an answer to a previous question presented to said user;
 - means for creating a user profile for said user based on gathering of said information, said user profile further comprised of at least one question and one corresponding answer;
 - means for storing said user profile; and
 - means for matching an attribute of said user profile with at least affinity group, said affinity groups being previously stored in said storage means.
63. A method for matching a user profile to a plurality of user profiles, comprising the steps of:
- receiving a first user profile;
 - assigning a score value to at least one match group;
 - matching said first user profile with at least a second user profile from said plurality of user profiles and assigning an overall fitness score; and

reporting said fitness score.

34. The method of Claim 65, wherein said score value is a relative weight of said match group.
35. The method of Claim 66, wherein said weight is proportionate to at least the importance of a score value of said match group to the said overall fitness score.
66. The method of Claim 66, wherein said match group is further comprised of at least one of match field and an affinity group.
67. The method of Claim 68, wherein said match field comprises a score value.
68. The method of Claim 68, wherein said affinity group comprises a score value.
69. The method of Claim 65, wherein said match group comprises further one of a deterministic and a non-deterministic match group.
70. The method of Claim 71, wherein a score is determined for a profile only if there exists a match to at least said deterministic match group.
71. The method of Claim 65, wherein said matching comprises the steps of:
 - a) selecting said second user profile from a plurality of user profiles not previously matched with said first user profile;

b) comparing a match field of said first user profile to a respective match field of said second user profile, and determining a match group score;

c) repeating step b) until all match fields requiring a comparison are matched between said first user profile and said second user profile;

d) assigning a fitness score to said second user profile based on the plurality of said scores determined in step b);

e) repeating the method steps from step a) until all available user profiles are matched against said first user profile;

f) reporting the fitness scores.

72. The method of Claim 73, wherein said step b) further comprises the step of matching at least one of a match field and an affinity.

73. The method of Claim 74, wherein said fitness score is at least a tally of score values of at least one of a match group, a match field, and an affinity.

74. The method of Claim 73, wherein said fitness scores of step f) are sorted by order of fitness.

75. The method of Claim 76, wherein user profiles having a highest fitness scores are grouped into an affinity group.

76. The method of Claim 77, wherein a number of user profiles is determined using any of:

- a minimum fitness score of a user profile;
- range of fitness scores;
- an absolute number of the user profiles;
- a defined percent of user profiles; and
- a date range of user profiles.

77. The method of Claim 65, further comprising the steps of:
- receiving information of a type of report requested;
 - if said report is of a type requiring receipt of financial commitment, then receiving relevant information;
 - providing the desired report.
78. The method of Claim 79, wherein said receipt of financial commitment comprises the step of
- receiving any of credit card information, debit card information, purchase order information, coupon information, and check information.
79. The method of Claim 65, wherein said plurality of user profiles comprises an affinity group.
80. The method of Claim 65, wherein said fitness score is at least a weighted score of at least one of a match group, a match field, and an affinity group.

81. A computer software product containing instructions for matching a user profile to a plurality of user profiles, the instructions further being capable of executing at least the steps of:

receiving a first user profile;

assigning a score value to at least a match group;

matching said first user profile with at least a second user profile from said plurality of user profiles;

assigning a fitness score to said at least second user profile; and

reporting the fitness score of at least said second user profile.

82. The computer software product of Claim 83, wherein said matching step comprises the steps of:

a) selecting said second user profile from a plurality of user profiles not previously matched with said first user profile;

b) comparing a match field of said first user profile to a respective match field of said second user profile, and determining a score;

c) repeating step b) until all match fields requiring a comparison are matched between said first user profile and said second user profile;

d) assigning a fitness score to said second user profile based on the plurality of said scores determined in step b);

e) repeating the method from step a) until all available user profiles are matched against said first user profile; and

f) reporting the fitness scores.

83. The computer software product of Claim 84, wherein said step b) further comprises the step of:
- matching at least one of a match field and an affinity.
84. The computer software product of Claim 83, further comprising the steps of:
- receiving information of the type of report requested;
- if said report is of a type requiring receipt of financial commitment, then receiving relevant information; and
- providing a desired report.
85. A method for matching a user profile to at least an affinity group, comprising the steps of:
- receiving a first user profile;
- assigning a score value to at least a match group;
- matching said first user profile with said at least an affinity of said affinity group;
- assigning a fitness score to said affinity group; and
- reporting said fitness score.
86. The method of Claim 87, wherein said matching step comprises the steps of:
- a) selecting said first affinity group from a plurality of affinity groups not previously matched with said first user profile;
- b) comparing a match field of said first user profile to a respective match field of said first affinity, and determining a match group score;

c) repeating step b) until all match groups requiring a comparison are matched between said first user profile and said first affinity;

d) assigning a fitness score to said affinity group based on the plurality of said scores determined in step b);

e) repeating the method from step a) until all available affinity groups are matched against said first user profile; and

f) reporting the fitness scores.

87. The method of Claim 87, further comprising the steps of:

receiving information of a type of report requested;

if said report is of a type requiring receipt of financial commitment, then receiving the relevant information; and

providing a desired report.

88. A computer software product containing instructions for matching a user profile to at least an affinity group, the instructions further being capable of executing at least the steps of:

receiving a first user profile;

assigning a score value to at least a match group;

matching said first user profile with at least an affinity of said affinity ;

assigning a fitness score to said affinity group; and

reporting the fitness score of at least said first affinity group.

89. The computer software product of Claim 90, wherein said matching step comprises the steps of:

- a) selecting said first affinity group from a plurality of affinity groups not previously matched with said first user profile;
- b) comparing a match field of said first user profile to the respective match field of said first affinity, and determining a match group score;
- c) repeating step b) until all match groups requiring a comparison are matched between said first user profile and said first affinity;
- d) assigning a fitness score to said affinity group based on a plurality of said scores determined in step b);
- e) repeating the method from step a) until all available affinity groups are matched against said first user profile; and
- f) reporting fitness scores.

90. The computer software product of Claim 90, further comprising the steps of:

- receiving information of a type of report requested;
- if said report is of a type requiring receipt of financial commitment, then receiving relevant information; and
- providing a desired report.

91. An apparatus for performing automated surveys, comprising:

- database means containing at least a plurality of prospective survey questions and prospective answers;

memory means for storing code, wherein said code contains at least code to perform an automated survey using said plurality of survey questions and prospective answers, for selecting a questions and respective prospect answers based on at least a response provided to a previous question, code for creating a user profile, code for creating at least an affinity group based on a plurality of user profiles, and code for association of said user profile with at least an affinity group; computational means for executing said code; and communication means for communication with at least a user.

92. The apparatus of Claim 93, said database means further comprising:
at least one of user profiles database, affinity groups database, and reporting definitions.
93. The apparatus of Claim 93, wherein said code to perform an automated survey selects one of said plurality of survey questions based on at least one of answers provided by said user, said user profile, and an affinity group.
94. The apparatus of Claim 93, further comprising:
means for periodically executing said code for creating at least an affinity group based on a plurality of user profiles.
95. The apparatus of Claim 93, wherein said apparatus further comprises:
means for providing at least a report.

96. The apparatus of Claim 97, further comprising
means for providing said at least a report as at least one of a basic report
and an extended report.
97. The apparatus of Claim 98, further comprising
means for allowing free access to said basic report.
98. The apparatus of Claim 98, further comprising:
means for receiving billing information for providing said extended report.
99. The apparatus of Claim 97, wherein said report is provided in view of at least one
of a user profile and an affinity group.
100. The apparatus of Claim 93, wherein said communication means comprises at least
one of a local area network, a wide area network, and the world-wide-web.
101. A system for the purpose of performing automated surveys, comprising:
a network connected to at least a client, said client configured with at
least a Web browser;
a database for storing at least a plurality of survey questions and
prospective answers; and,
a server having access to said network and said database, said server
configured to at least survey at least a user using said plurality of survey questions
and prospective answers and for selecting said questions and respective prospect

answers based on at least a response provided to a previous question, for creating user profiles, for creating at least an affinity group based on a plurality of user profiles, and for associating said user profile with at least an affinity group.